

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Previously Presented) A soft tissue coagulation device, comprising:
 - a shaft defining a distal end and including an outer structure formed from material that has a thermal conductivity of at least 0.8 W/m•K and is substantially electrically nonconductive;
 - at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft; and
 - at least one fluid lumen defined by the outer structure and located such that a portion thereof is aligned with the at least one energy transmission device.
2. (Original) A device as claimed in claim 1, wherein the shaft is relatively short.
3. (Original) A device as claimed in claim 1, wherein at least a portion of the shaft is relatively stiff.
4. (Original) A device as claimed in claim 3, wherein the shaft includes a malleable mandrel and the outer structure is mounted on the malleable mandrel.
5. (Original) A device as claimed in claim 3, wherein the shaft includes a tubular member defining a distal end and the outer structure extends distally from the distal end of the tubular member.

6. (Original) A device as claimed in claim 1, wherein the shaft include a proximal portion and a distal portion, the device further comprising:

a steering apparatus that deflects the distal portion relative to the proximal portion.

7. (Original) A device as claimed in claim 1, wherein the shaft includes a pre-bent portion.

8. (Original) A device as claimed in claim 1, wherein the at least one fluid lumen comprises an inlet lumen and an outlet lumen.

9. (Original) A device as claimed in claim 8, wherein the inlet lumen and the outlet lumen define respective distal ends, the device further comprising:

a non-conductive tip member defining a lumen that connects the distal ends of the inlet lumen and outlet lumen.

10. (Original) A device as claimed in claim 1, wherein the at least one fluid lumen includes inner and outer lumen surfaces defining a distance therebetween, the outer structure includes a wall defining a wall thickness between the at least one energy transmission device and the at least one fluid lumen, and the distance between the inner and outer lumen surfaces is greater than the wall thickness.

11. (Original) A device as claimed in claim 1, wherein the at least one energy transmission device comprises a plurality of longitudinally spaced energy transmission devices.

12. (Original) A device as claimed in claim 1, wherein the at least one energy transmission device comprises an electrode.

13. (Previously Presented) A soft tissue coagulation device, comprising:

a shaft defining a distal end and a perimeter and including an outer structure formed from material that is relatively high in thermal conductivity and substantially electrically nonconductive;

at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft and extending around less than the entire perimeter; and

inlet and outlet lumens defined by the outer structure and located such that a portion of the inlet lumen is aligned with the at least one energy transmission device and is between a substantial portion of at least one the energy transmission device and the outlet lumen.

14. (Previously Presented) A device as claimed in claim 13, wherein the outlet lumen includes thermal insulation.

15. (Currently Amended) A soft tissue coagulation device, comprising:

a shaft defining a proximal portion and a distal end and including an outer structure formed from material that is substantially electrically nonconductive;

at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft;

a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness extends from the fluid inlet lumen to the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and

a fluid outlet lumen defined by the outer structure such that a wall having a wall thickness extends from the outlet inlet lumen to the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a

distance therebetween that is greater than the wall thickness and operably connected to the fluid inlet lumen;

wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, the fluid outlet lumen is operably connected to the fluid inlet lumen and all fluid entering the outer structure through the fluid inlet will exit the outer structure through the fluid outlet.

16. (Original) A device as claimed in claim 15, wherein the shaft is relatively short.

17. (Previously Presented) A soft tissue coagulation device, comprising:

a shaft defining a proximal portion and a distal end and including an outer structure formed from material that is substantially electrically nonconductive, at least a portion of the shaft being relatively stiff;

at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft;

a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and

a fluid outlet lumen defined by the outer structure and operably connected to the fluid inlet lumen;

wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, and all fluid entering the outer structure through the fluid inlet will exit the outer structure through the fluid outlet.

18. (Previously Presented) A soft tissue coagulation device, comprising:

- a shaft defining a proximal portion and a distal end and including a malleable mandrel and an outer structure mounted on the malleable mandrel formed from material that is substantially electrically nonconductive;
- at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft;
- a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and
- a fluid outlet lumen defined by the outer structure and operably connected to the fluid inlet lumen;

wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, and all fluid entering the outer structure through the fluid inlet will exit the outer structure through the fluid outlet.

19. (Previously Presented) A soft tissue coagulation device, comprising:

- a shaft defining a proximal portion and a distal end and including a tubular member defining a distal end and an outer structure extending distally from the distal end of the tubular member, the outer structure being formed from material that is substantially electrically nonconductive;
- at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft;
- a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy

transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and

 a fluid outlet lumen defined by the outer structure and operably connected to the fluid inlet lumen;

 wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, and all fluid entering the outer structure through the fluid inlet will exit the outer structure through the fluid outlet.

20. (Original) A device as claimed in claim 15, wherein the shaft include a proximal portion and a distal portion, the device further comprising:

 a steering apparatus that deflects the distal portion relative to the proximal portion.

21. (Previously Presented) A soft tissue coagulation device, comprising:

 a shaft defining a proximal portion and a distal end and including an outer structure formed from material that is substantially electrically nonconductive and a pre-bent portion;

 at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft;

 a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and

 a fluid outlet lumen defined by the outer structure and operably connected to the fluid inlet lumen;

 wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen

defines an outlet associated with the proximal portion of the shaft, and all fluid entering the outer structure though the fluid inlet will exit the outer structure through the fluid outlet.

22. (Canceled)

23. (Previously Presented) A device as claimed in claim 15, wherein the inlet lumen and the outlet lumen define respective distal ends, the device further comprising:
a non-conductive tip member defining a lumen that connects the distal ends of the inlet lumen and outlet lumen.

24. (Previously Presented) A soft tissue coagulation device, comprising:
a shaft defining a proximal portion and a distal end and including an outer structure formed from material that is substantially electrically nonconductive;
a plurality of longitudinally spaced energy transmission devices supported on the outer structure in spaced relation to the distal end of the shaft;
a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the energy transmission devices, located such that a portion thereof is aligned with the energy transmission devices, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and
a fluid outlet lumen defined by the outer structure and operably connected to the fluid inlet lumen;
wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, and all fluid entering the outer structure though the fluid inlet will exit the outer structure through the fluid outlet.

25. (Original) A device as claimed in claim 15, wherein the at least one energy transmission device comprises an electrode.

26. (Previously Presented) A soft tissue coagulation device, comprising:

 a shaft defining a proximal portion, a distal end and a perimeter and including an outer structure formed from material that is substantially electrically nonconductive;

 at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft and extending around less than the entire perimeter;

 a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and

 a fluid outlet lumen defined by the outer structure and operably connected to the fluid inlet lumen;

 wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, all fluid entering the outer structure through the fluid inlet will exit the outer structure through the fluid outlet, and the inlet lumen is between a substantial portion of at least one the energy transmission device and the outlet lumen.

27. (Previously Presented) A soft tissue coagulation device as claimed in claim 26, wherein the outlet lumen includes thermal insulation.

28. (Previously Presented) A soft tissue coagulation device as claimed in claim 15, wherein the distance between the inner and outer lumen surfaces is at least two times greater than the wall thickness.

29-32. (Cancelled)

33. (Previously Presented) A soft tissue coagulation device, comprising:
a shaft defining a distal end and including a non-porous outer structure formed from material that is relatively high in thermal conductivity and substantially electrically nonconductive;

at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft; and

at least one fluid lumen defined by the outer structure and located such that a portion thereof is aligned with the at least one energy transmission device.

34. (Previously Presented) A soft tissue coagulation device, comprising:

a shaft defining a distal end and including an outer structure formed from material that is relatively high in thermal conductivity and substantially electrically nonconductive;

at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft; and

at least one fluid lumen defined by the outer structure and located such that a portion thereof is aligned with the at least one energy transmission device;

wherein the outer structure is configured such that the at least one energy transmission device will not come into contact with fluid that has passed through the at least one fluid lumen.

35. (Currently Amended) A soft tissue coagulation device, comprising:

a shaft defining a proximal portion, a distal end and an exterior and including an outer structure formed from material that is substantially electrically nonconductive;

at least one energy transmission device located on the exterior of the outer structure in spaced relation to the distal end of the shaft;

a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and

a fluid outlet lumen defined by the outer structure and operably connected to the fluid inlet lumen;

wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, and all fluid entering the outer structure through the fluid inlet will exit the outer structure through the fluid outlet.

36. (Previously Presented) A soft tissue coagulation device, comprising:

a shaft defining a proximal portion and a distal end and including an outer structure formed from material that is substantially electrically nonconductive;

at least one energy transmission device supported on the outer structure in spaced relation to the distal end of the shaft;

a fluid inlet lumen defined by the outer structure such that a wall having a wall thickness is between the fluid inlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and including inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness; and

a fluid outlet lumen operably connected to the fluid inlet lumen and defined by the outer structure such that a wall having a wall thickness is between the fluid outlet lumen and the at least one energy transmission device, located such that a portion thereof is aligned with the at least one energy transmission device, and includes inner and outer lumen surfaces defining a distance therebetween that is greater than the wall thickness;

wherein the outer structure is configured such that the fluid inlet lumen includes an inlet associated with the proximal portion of the shaft, the fluid outlet lumen defines an outlet associated with the proximal portion of the shaft, and all fluid entering the outer structure through the fluid inlet will exit the outer structure through the fluid outlet.

37. (Previously Presented) A device as claimed in claim 33, wherein the shaft is relatively short.

38. (Previously Presented) A device as claimed in claim 33, wherein at least a portion of the shaft is relatively stiff.

39. (Previously Presented) A device as claimed in claim 38, wherein the shaft includes a malleable mandrel and the outer structure is mounted on the malleable mandrel.

40. (Previously Presented) A device as claimed in claim 33, wherein the at least one fluid lumen comprises an inlet lumen and an outlet lumen.

41. (Previously Presented) A device as claimed in claim 33, wherein the at least one fluid lumen includes inner and outer lumen surfaces defining a distance therebetween, the outer structure includes a wall defining a wall thickness between the at least one energy transmission device and the at least one fluid lumen, and the distance between the inner and outer lumen surfaces is greater than the wall thickness.

42. (Previously Presented) A device as claimed in claim 33, wherein the at least one energy transmission device comprises a plurality of longitudinally spaced energy transmission devices.

43. (Previously Presented) A device as claimed in claim 33, wherein the at least one energy transmission device comprises an electrode.

44. (Previously Presented) A device as claimed in claim 34, wherein the shaft is relatively short.

45. (Previously Presented) A device as claimed in claim 34, wherein at least a portion of the shaft is relatively stiff.

46. (Previously Presented) A device as claimed in claim 45, wherein the shaft includes a malleable mandrel and the outer structure is mounted on the malleable mandrel.

47. (Previously Presented) A device as claimed in claim 34, wherein the at least one fluid lumen comprises an inlet lumen and an outlet lumen.

48. (Previously Presented) A device as claimed in claim 34, wherein the at least one fluid lumen includes inner and outer lumen surfaces defining a distance therebetween, the outer structure includes a wall defining a wall thickness between the at least one energy transmission device and the at least one fluid lumen, and the distance between the inner and outer lumen surfaces is greater than the wall thickness.

49. (Previously Presented) A device as claimed in claim 34, wherein the at least one energy transmission device comprises a plurality of longitudinally spaced energy transmission devices.

50. (Previously Presented) A device as claimed in claim 34, wherein the at least one energy transmission device comprises an electrode.

51. (Previously Presented) A device as claimed in claim 35, wherein the shaft is relatively short.

52. (Previously Presented) A device as claimed in claim 35, wherein at least a portion of the shaft is relatively stiff.

53. (Previously Presented) A device as claimed in claim 52, wherein the shaft includes a malleable mandrel and the outer structure is mounted on the malleable mandrel.

54. (Previously Presented) A device as claimed in claim 35, wherein the at least one energy transmission device comprises a plurality of longitudinally spaced energy transmission devices.

55. (Previously Presented) A device as claimed in claim 35, wherein the at least one energy transmission device comprises an electrode.